2. BMP Guidelines

Current engineering and construction standards applicable to each jurisdiction remain. This manual for Best Management Practices (BMP) does not create new construction standards except as applicable to specific BMP. Graphic and technical information for approved BMP as well as proper application techniques are included. Performance may vary widely depending on site-specific activities and conditions. The information provided within this manual is for illustrative purposes and as a general aid to the proper application of construction controls. It is not intended as a substitute for professional engineering judgment or practice.

The applicable local or state permit defines performance standards. Applicable local or state permits may specify the water discharge limitations for quantity and quality. For example, a limit and/or range may be specified for indicator parameters such as turbidity, color, pH, and oil.

Application and Use of BMP

The BMP described herein are approved methods to be used to adequately control construction-related erosion, sedimentation, and water and airborne pollutant releases from construction sites. These BMP are to be utilized to satisfy the development of an "Erosion and Sedimentation Control Plan" or the conditions of a "Construction Activity Permit" as applicable. The effectiveness of the BMP in any application depends on the proper use, construction, and maintenance of the BMP and is subject to certain performance criteria as defined by the "Construction Activity Permit" or applicable local ordinance.

There are many factors that must be considered in the proper selection and successful application of BMP. The BMP fall into two basic classes, preventative measures and containment measures. Preventive measures are typically more effective of the two and entail those practices which eliminate or minimize exposure while containment measures are directed at capturing and controlling released sediment and pollutants. For example, dust control through water spraying of exposed surfaces or use of stone and gravel is a preventive measure. The descriptions of each of the BMP in this manual are characterized as to whether they are primarily preventive or containment types.

Certain factors are key to successful pollution control and should be addressed in a plan of control. A brief discussion of these factors follows.

Stabilization of Denuded Areas and Soil Stockpiles

Soil stabilization measures protect soil from the erosion forces or raindrop impact, flowing water, and wind. Soil stabilization is a preventive measure and one of the more effective measures. Applicable practices include ground cover preservation, vegetative establishment, mulching, surface treatments, surface cover, and early use of stone/gravel in areas to be paved.

When larger areas are left bare or unprotected, containment measures such as sediment basins in addition to other appropriate BMP measures may be necessary.

Protection of Adjacent Properties

Properties adjacent to the construction site must be considered in any control plan. Care must be taken to prevent increased water flow and sediment deposition on adjacent properties. A variety of measures may need to be considered to properly control runoff. Typically, no one control measure will suffice. In most cases, both preventive and containment measures must be utilized.

Persons engaged in construction activity, property development, or property management should also be aware of civil law and legal precedents governing the discharge and or alteration of the flow onto or from adjoining properties. Generally, the rule is “cause no harm.”

Protection of Waterways and Outlets

On-site stormwater conveyance channels, both temporary and permanent, must be designed and constructed in a way to prevent erosion of the channel and any connecting conveyance. In addition, existing and new storm sewer inlets must be protected to prevent sediment deposition.

Construction-related activity should not encroach or adversely impact existing water courses or floodways. In addition, care should be exercised in flood prone areas to prevent filling and obstructions that may increase flood levels or exacerbate scour or erosion.

Special care should also be exercised with regard to sinkholes and wells, which may provide source waters for drinking and healthy streams.

Construction Planning and Management

The responsibility to control erosion, sediment transport, and stormwater pollution from a construction site requires a comprehensive plan. Elements of the plan include

consideration for factors that minimize the exposure of soils and pollutants such as debris, oils, and construction materials to rain or wind. Site selection that minimizes the degree of difficulty in controlling erosion is the first consideration in any successful plan of development.

Preventive measures such as construction planning, sequencing, scheduling, and timing to reduce exposure can greatly minimize the degree of difficulty. In any event, containment measures must be in place prior to the start of construction activities that create exposure. It is also essential that the planning and management of the site include the proper maintenance of all BMP.

Roadwork and Pavement Construction

Roadwork and pavement construction activities create significant pollution problems and require special considerations to minimize and prevent occurrences. Preventative and containment measures are usually required. These measures may include the following:

- Cover storm drain inlets and manholes when paving or applying paving materials and coatings.
- Apply concrete, asphalt, and coatings during dry weather to prevent contaminant releases.
- Park paving machines and equipment over drip pans or absorbent materials to capture and properly dispose of fluids and equipment-released pollutants.
- Use limited amounts of water when sawing or milling pavement. Protect all affected catch basins through appropriate measures, i.e., filter bags, inlet sediment traps, etc., and remove and reuse or properly dispose of all accumulated slurry, residue and sediment from the gutter, pavement, and inlet traps.
- Wash down exposed concrete aggregate only when the wash water can (1) flow onto an absorbent soil area and (2) drain into a capture basin that can be pumped and reused or properly disposed. Concrete truck wash-down waters should be reused. A single truck chute wash may direct into a properly selected and prepared on-site hole.
- Never wash sweepings from exposed aggregate concrete into a street or storm drain. Materials should be reused or properly disposed to prevent water and airborne contamination.
- Broken concrete and asphalt should be recycled.

BMP Descriptions

The BMP descriptions included in this manual are not exhaustive and do not include every BMP that may be employed for construction site management. This manual describes those measures that have come into common practice and have been found to be effective when properly applied and maintained. Additional BMP may be included as this manual is updated.